

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Grayson
STREAM NAME: New River
HYDROLOGIC UNIT: 05050001
SEGMENT ID.: VAS-N02R_NEW01A98
SEGMENT SIZE: 0.6 - Miles
INITIAL LISTING: 1998 **TMDL Schedule** 2006 - 2008

UPSTREAM LIMIT:

DESCRIPTION: North Carolina State line
RIVER MILE: 189.06
LATITUDE: 36.57500 **LONGTITUDE:** -81.32389

DOWNSTREAM LIMIT:

DESCRIPTION: Fields dam backwater
RIVER MILE: 188.46
LATITUDE: 36.58333 **LONGTITUDE:** -81.32861

The segment extends from the backwaters of the Fields Dam near Mouth of Wilson, upstream to the North Carolina state line.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Partially Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

A biological monitoring station located at 9-NEW188.71 was sampled twice in 1994 using RPB2 protocol and moderately impaired. In this cycle, the station was sampled once and not impaired. There is an ambient station located at 9-NEW187.46 that supports the swimmable use with only 4 violations of the fecal coliform standard out of 56 sampling events during this cycle.

IMPAIRMENT SOURCE Unknown

The source is unknown, however, since New River flows from North Carolina into Virginia, the land uses impacting this segment may be in North Carolina.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Grayson
STREAM NAME: Elk Creek
HYDROLOGIC UNIT: 05050001
SEGMENT ID.: VAS-N05R_EKC01A00,
EKC02A00
SEGMENT SIZE: 10.69 - Miles
INITIAL LISTING: 2002 **TMDL Schedule** 2004 - 2010
UPSTREAM LIMIT:

DESCRIPTION: Turkey Fork confluence
RIVER MILE: 10.69
LATITUDE: 36.70778 **LONGTITUDE:** -81.12944

DOWNSTREAM LIMIT:

DESCRIPTION: New River confluence
RIVER MILE: 0.00
LATITUDE: 36.67167 **LONGTITUDE:** -81.02944

The segment begins at its Turkey Fork confluence and continues to confluence with New River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Swimmable Use - Partially Supporting

IMPAIRMENT CAUSE: Fecal Coliform

An ambient monitoring station, 9-EKC003.78, shows 2 of 18 fecal coliform samples violating the water quality standard. Above this segment of Elk Creek the stream is designated stockable trout waters. The sampling station is downstream of the stockable trout waters which are between Turkey Fork and Knob Fork confluences with Elk Creek.

IMPAIRMENT SOURCE Unknown

The source is unknown.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Grayson, Carroll, Galax, City of
STREAM NAME: Chestnut Creek
HYDROLOGIC UNIT: 05050001
SEGMENT ID.: VAS-N06R_CST01A94,
VAS-N06R_CST02A04
SEGMENT SIZE: 14 - Miles
INITIAL LISTING: 1994 **TMDL Schedule** 2004 - 2006
UPSTREAM LIMIT:

DESCRIPTION: Galax Intake
RIVER MILE: 14.00
LATITUDE: 36.66278 **LONGTITUDE:** -80.92000

DOWNSTREAM LIMIT:

DESCRIPTION: New River confluence
RIVER MILE: 0.00
LATITUDE: 36.75944 **LONGTITUDE:** -80.95556

The segment includes the mainstem of Chestnut Creek from the Galax raw water intake to the New River confluence. The segment is one mile shorter due to NHD dataset use.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Partially Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

Biological monitoring stations at 9-CST001.31 and 9-CST002.64 are moderately impaired. An ambient station at 9-CST002.64 fully supports the swimmable use with 2 violations of 20 fecal coliform samples. This station indicates that zinc, and nickel have exceeded the effect range-median (ER-M) values. These exceedences may threaten aquatic life in this segment. Biological stations at 9-CST010.18 and 9-CST013.9 indicate fully supporting aquatic life uses for 2002.

IMPAIRMENT SOURCE Resource Extraction

The source of benthic impairment is probably due to mining activities which historically occurred in the area. Allied-Signal Gossen Mine is the former site of sulfur mining operations in an iron-pyrrhotite seam that closed in 1962. This facility has a VPDES permit to treat acid mine drainage. Sources for sediment metal exceedences are unknown.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Wythe
STREAM NAME: Cripple Creek
HYDROLOGIC UNIT: 05050001
SEGMENT ID.: VAS-N09R_CPL02A98
SEGMENT SIZE: 6.24 - Miles
INITIAL LISTING: 1998 **TMDL Schedule** 2008 - 2010
UPSTREAM LIMIT:

DESCRIPTION: Dry Run confluence
RIVER MILE: 20.72
LATITUDE: 36.81944 **LONGTITUDE:** -81.17389

DOWNSTREAM LIMIT:

DESCRIPTION: Francis Mill Creek confluence
RIVER MILE: 14.51
LATITUDE: 36.82389 **LONGTITUDE:** -81.09944

The segment begins at the confluence with Dry Run just above the community of Speedwell on Route 21 and 749 and extends to Francis Mill Creek, near the community of Cripple Creek. The Creek roughly parallels Routes 749 and 619 in Wythe County.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Partially Supporting

IMPAIRMENT CAUSE: General Standard (Benthic)

A benthic station is located at 9-CPL018.37 which rates this segment as threatened. EPA added this segment to Part 1 of the 1998 TMDL list, based on two benthic samples, one is moderately impaired and the later one is not impaired. No additional sampling has occurred since 1998 but assessment guidance lists this as threatened and not impaired.

IMPAIRMENT SOURCE Unknown

EPA overlisted in 1998. The 2002 305(b) assessment reports this segment as threatened and not partially impaired. More data is needed to make a determination.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Wythe
STREAM NAME: Reed Creek
HYDROLOGIC UNIT: 05050001
SEGMENT ID.: VAS-N10R_RDC01A00
SEGMENT SIZE: 1.37 - Miles
INITIAL LISTING: 2002 **TMDL Schedule** 2010 - 2014
UPSTREAM LIMIT:

DESCRIPTION: Pine Run confluence
RIVER MILE: 33.74
LATITUDE: 36.92972 **LONGTITUDE:** -81.13250

DOWNSTREAM LIMIT:

DESCRIPTION: Venrick Run confluence
RIVER MILE: 32.37
LATITUDE: 36.91472 **LONGTITUDE:** -81.11944

The segment begins at the confluence with Pine Run near the Pine Ridge gap that and extends to Venrick Run. This segment of Reed Creek is in a Public Water Supply for Wythe. It flows through the small community of Petunia just to the west of Wytheville.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Swimmable Use - Partially Supporting

IMPAIRMENT CAUSE: Fecal Coliform

An ambient station located at 9-RDC033.94 has 3 of 12 fecal coliform violations. This segment is in the public water supply for Wytheville.

IMPAIRMENT SOURCE NPS - Agriculture

The land use is agriculture.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Pulaski
STREAM NAME: Claytor Lake - Peak Creek
HYDROLOGIC UNIT: 05050001
SEGMENT ID.: VAW-N16L_PKC01A02
SEGMENT SIZE: 323.24 - Acres
INITIAL LISTING: 2002 **TMDL Schedule** 2010 - 2014
UPSTREAM LIMIT:

DESCRIPTION: Backwaters of Claytor Lake Peak Cr. arm.

RIVER MILE: 5.42

LATITUDE: 37.04639 **LONGTITUDE:** -80.72782

DOWNSTREAM LIMIT:

DESCRIPTION: Peak Cr. mouth on New R.

RIVER MILE: 0.00

LATITUDE: 37.05056 **LONGTITUDE:** -80.67164

The segment begins at Peak Creek's backwaters of Claytor Lake and ends at Peak Creek's mouth on the New River in Claytor Lake. The entire segment is on the Dublin Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Partially Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs

Fish Consumption Use

2000 collections at 9-PKC007.82 (Rt. 99 Bridge) and 9-PKC004.65 (Rt. 100 Bridge) each reveal polychlorinated biphenyls (PCBs) in excess of the human health-risk carcinogenic screening value (SV) of 54 parts per billion (ppb) in tissue from two species. 9-PKC007.82 (VAW-N17R) finds a Smallmouth bass with 71.4 ppb and 9-PKC004.65 a carp with 150 ppb. Due to the proximity of the stations and two species found with PCBs the segment only partially supports the fish consumption use. The fish consumption impairment extends upstream to ~0.20 miles downstream of the Washington Avenue bridge in Pulaski. There is no Virginia Department of Health (VDH) Advisory as tissue concentrations are below the VDH action level of 600 ppb. Information on the fish tissue sampling program can be viewed at <http://www.deq.state.va.us/water/>

Aquatic Life Use

Top Layer: Citizen stations 9PKC-CL7-FC and 9PKC-CL6-FC find total phosphorus (TP) and chlorophyll a (CHLa) in excess of the 0.05 mg/l threshold values for reservoirs. 9PKC-CL7-FC (Conrad Brother's Marina) records 11 of 18 TP samples and two of 11 CHLa samples in excess of the threshold. 9PKC-CL6-FC reports three of 18 TP and three of 11 CHLa in excess of the threshold. These results cause the waters to be fully supporting, but threatened. Maxima values (mg/l) are as follows:

9PKC-CL7-FC TP 0.07 CHLa 0.06
9PKC-CL6-FC TP 0.10, CHLa 0.06

Bottom Layer: Dissolved oxygen in the bottom layer of the reservoir exceeds the 4.0 mg/l minimum criterion

for Class IV waters. Exceedances occur in the late spring, summer and early fall. Dissolved oxygen depletion below the thermocline is a natural occurrence in reservoirs. Water Quality Standards do not specifically address the maintenance of dissolved oxygen levels (stratification) in a reservoir bottom layer. The minimum criterion, based on Class of water, applies to all waters in the Commonwealth. Depth profiles at 9-PKC000.00 report 19 of 32 dissolved oxygen measurements in excess of the criterion. Exceedances of the minimum criterion are believed to occur in the entirety of the segment even though dissolved oxygen measurements have not been conducted throughout its length. Therefore the segment is listed as a natural impairment (see Part 1C). The waters do not support the aquatic life use based on the existing Class IV dissolved oxygen minimum criterion and the natural depletion of oxygen at depth in reservoirs. The 2002 dissolved oxygen 303(d) Listing is new to this segment.

The waters are fully supporting, but threatened based on the exceedance of the 1995 NOAA sediment effect-range median (ER-M) screening values (SV) for copper (Cu), zinc(Zn) and chlorodane. Station 9-PKC004.65B records a 2000 sediment chlorodane value of 10.0 parts per billion (ppb) exceeding the SV of 6 ppb. Copper exceeds the SV of 270 parts per million (ppm) at 327, and zinc exceeds the SV of 410 ppm at 894 at 9-PKC004.65B. Station 9-PKC004.16 reports exceedances of copper (SV= 270, 4 of 4 samples, max. 610), lead (SV= 218, 1 of 4 samples, max. 230) and zinc (SV= 410, 4 of 4 samples, max 1470); Station 9-PKC000.00-BL (Peak Creek mouth) finds zinc exceedances (SV= 410, 3 of 4 samples, max. 520) all from 1996 through 1999 collections.

IMPAIRMENT SOURCE Unknown

Fish Consumption Use

The exact source(s) of the PCB contamination is unknown.

The Virginia Department of Health (VDH) PCB action level is 600 ppb in fish tissue. PCBs are a group of man-made industrial chemicals that exist as a mixture and may contain up to 209 individual compounds. Since 1977, PCBs have not been produced in the U.S., but are still found in the environment. PCBs were once widely used as coolants and lubricants in transformers, capacitors and other electrical equipment. Other information on VDH fish consumption advisories, prohibitions or bans can be viewed at <http://www.vdh.state.va.us>

Aquatic Life Use

Bottom dissolved oxygen depletion occurs naturally in reservoirs due to stratification.

Total phosphorus (chlorophyll a) sources are believed to be a mixture of nonpoint source contributions. Claytor Lake (Peak Creek portion) is designated by Virginia's Water Quality Standards as a Nutrient Enriched Water (9 VAC 25-260-350 A.4 and A.5.; NEW-5).

The exact source of the sediment nickel contamination is unknown.

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CITY/COUNTY: Pulaski
STREAM NAME: New River
HYDROLOGIC UNIT: 05050001
SEGMENT ID.: VAW-N16R_NEW01A00
SEGMENT SIZE: 0.81 - Miles
INITIAL LISTING: 1998 **TMDL Schedule** 2004 - 2010
UPSTREAM LIMIT:

DESCRIPTION: Big Reed Island Cr. Confluence
RIVER MILE: 107.75
LATITUDE: 36.93472 **LONGTITUDE:** -80.74990

DOWNSTREAM LIMIT:

DESCRIPTION: Claytor Lake backwaters
RIVER MILE: 106.94
LATITUDE: 36.93889 **LONGTITUDE:** -80.73961

This segment of the New River is between the Big Reed Island Creek confluence, near Route 100, and the backwaters of Claytor Lake near the Wythe/Pulaski county line.

Note: This segment was erroneously listed as part of N08R in 1998. Segment mileage has been adjusted to reflect station location and use of the National Hydrography Dataset (NHD).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Partial Support

IMPAIRMENT CAUSE: General Standard (Benthic) - 1998 303(d) Listed

A biological monitoring station, 9-NEW107.65 (Allisonia gage), was rated as moderately impaired twice in 1994 and not impaired in 1997. Although the 1994 Rapid Biological Protocol II (RBP II) surveys are outside the assessment data window the waters remain partially supporting the aquatic life use as insufficient data (one RBP II survey) do not allow a complete delisting. Additional RBP II survey data will allow for a more accurate determination of the aquatic life use support. The waters are thus 'impaired' for the aquatic life use based on the 1998 303(d) Listing and insufficient data to delist the segment. The segment is also adjusted to reflect the watershed boundary with N08R.

Station 9-NEW107.51, has effect range-median (ER-M) sediment screening value (SV) exceedances for lead (1996) and zinc (1996, 1997 & 1999). sediment lead (Pb, SV= 218 ppm, 1 of 3 samples max. 280) and zinc (Zn, SV= 410 ppm, 3 of 3 samples max. 1157) cause the aquatic life use to be full supporting, but threatened. The maximum lead and zinc values are found in the 1996 data.

This section of the New River was contained in the Plaintiffs Attachment B List for fecal coliform. The 2002 Assessment finds the swimming use is fully supported. Station 107.51 found only three of 52 samples in excess of the fecal coliform 1000 n/100 ml instantaneous criterion. Exceeding values are 1100 (1996), 3600 (1997) and 2100 (1998). Excluding maxima and including values reported as less than 100 (remark code "U") the average bacterial count is 91 n/100 ml. The instantaneous average including all reported counts is 216

n/100 ml.

IMPAIRMENT SOURCE Unknown

The exact source(s) of the General Standard (benthic) partial support and sediment exceedances are unknown. Resource extraction is a historic activity upstream of the watershed and may be the source of metal values in the sediments. Quarry and gravel industries and old iron furnaces are located in the region.

2002 Assessment fecal coliform bacteria do not exceed and are therefore not listed.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Pulaski
STREAM NAME: Peak Creek
HYDROLOGIC UNIT: 05050001
SEGMENT ID.: VAW-N17R_PKC02A00
SEGMENT SIZE: 4.46 - Miles
INITIAL LISTING: 1996 **TMDL Schedule** 2001 - 2010
UPSTREAM LIMIT:

DESCRIPTION: ~0.2 mi. downstream of the Washington St Bridge.

RIVER MILE: 9.88

LATITUDE: 37.04694 **LONGTITUDE:** -80.77727

DOWNSTREAM LIMIT:

DESCRIPTION: Backwaters of Claytor Lake.

RIVER MILE: 5.42

LATITUDE: 37.04639 **LONGTITUDE:** -80.72782

The segment extends upstream to approximately 0.2 miles downstream of the Washington Avenue Bridge on the Pulaski Quad. The segment ends at its inundation in Claytor Lake on the Dublin Quad.

Note: Slight changes in 1998 segment mileage are due to the use of the National Hydrography Dataset (NHD).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Partially Supporting, Swimmable Use - Partially Supporting, Aquatic Life Use - Partially Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs, Fecal Coliform, General Standard (Benthic) / Metals in sediment / Organics in sediment

Fish Consumption Use

2000 fish collections at 9-PKC007.82 (Rt. 99 Bridge) and 9-PKC004.65 (Rt. 100 Bridge) each reveal polychlorinated biphenyls (PCBs) in excess of the human health-risk carcinogenic screening value (SV) of 54 parts per billion (ppb) in tissue from two species. 9-PKC007.82 finds a Smallmouth bass with 71.4 ppb and 9-PKC004.65 a carp with 150 ppb. The fish consumption impairment extends to the Peak Creek arm of Claytor Lake. Station 9-PKC004.65 is in Claytor Lake (VAW-N16L). Due to the proximity of the stations and two species found with PCBs the segment only partially supports the fish consumption use. There is no Virginia Department of Health (VDH) Advisory as tissue concentrations are below the VDH action level of 600 ppb. The fish consumption impairment is a 2002 addition to the 1998 303(d) Listing. Information on the fish tissue sampling program can be viewed at <http://www.deq.state.va.us/water/>

Swimming Use

Exceedances of the fecal coliform bacteria instantaneous criterion of 1000 n/100 ml are found at station 9-PKC009.29 (near radio tower - Pulaski County). Four of 23 samples exceed the criterion. The swimming use is only partially supporting. This impairment is a 2002 addition.

Aquatic Life Use

Benthic impairment is caused by metals and habitat loss. The segment incorporates two Rapid Biological Protocol II (RBP II) stations 9-PKC009.29 (near radio tower - Pulaski County) and 9-PKC007.82 (Rt. 99 Bridge east of Pulaski). Both stations show moderate impact to the benthic community. An upstream biological and AQM station at the Commerce Street Bridge (9-PKC011.11) shows no impairment.

Exceedances of the 1995 NOAA ER-M sediment metal screening values (SV) in parts per million (ppm) are found at 9-PKC009.29 and 9-PKC007.82. Station 9-PKC009.29 records exceedances for zinc (Zn, SV= 410 ppm, 4 of 4 samples 1280 max.) and a 2000 sediment collection at 9-PKC007.82 finds exceedances for copper (SV= 270 ppm, 1 of 1 sample 362 max.), zinc (Zn, SV= 410 ppm, 1 of 1 sample 1104 max.) and in parts per billion (ppb) chlorodane (SV= 6 ppb, 1 of 1 sample 8.90 max.). Sediment polyaromatic hydrocarbons (PAHs) also exceed their respective SVs in ppb for the following: phenanthrene (SV 1500 ppb) 3049.49, fluoranthene (SV 5100 ppb) 5866.27, pyrene (SV 2600 ppb) 3877.27 and benz(a)anthracene (SV 1600 ppb) 2047.29. The segment is fully supporting, but threatened for the aquatic life use.

Nine Rapid Biological Protocol II benthic survey results reveal no impairment to the biota at station 9-PKC011.11 (Commerce St. Bridge) even though exceedances for Lead (Pb, SV=218 ppm, 3 of 4 samples 496 max.) and zinc (Zn, SV=410 ppm, 3 of 4 samples 1520 max.) are reported. A 1999 collection also found exceedances in parts per billion (ppb) of total DDT (includes metabolites (SV= 46.1, 1 of 4 samples 130 max.). Metabolite values are DDD (SV= 20, 1 of 4 sample 30 max.), DDE (SV= 27 ppb, 1 of 4 sample 40 max.) and DDT (SV= 7 ppb, 2 of 4 samples 60 max.). However RBP II surveys report these waters are not 'Threatened'.

IMPAIRMENT SOURCE Unknown, NPS - Urban, NPS - Urban / Legacy Industrial / Unknown

Fish Consumption Use

The exact source(s) of the PCB contamination is unknown.

The Virginia Department of Health (VDH) PCB action level is 600 ppb in fish tissue. PCBs are a group of man-made industrial chemicals that exist as a mixture and may contain up to 209 individual compounds. Since 1977, PCBs have not been produced in the U.S., but are still found in the environment. PCBs were once widely used as coolants and lubricants in transformers, capacitors and other electrical equipment. Other information on VDH fish consumption advisories, prohibitions or bans can be viewed at <http://www.vdh.state.va.us>

Swimming Use

The source of the swimming impairment is urban nonpoint source pollution.

Aquatic Life Use

General Standard (Benthic) impairment sources are urban nonpoint source pollution and nonpoint source runoff from an old industrial plant site along the banks of Peak Creek.

Sediment metals exceedances are believed to be nonpoint source runoff from an old industrial plant site along the banks of Peak Creek. Upstream organic exceedances are unknown.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Montgomery
STREAM NAME: Crab Creek
HYDROLOGIC UNIT: 05050001
SEGMENT ID.: VAW-N18R_CBC04A00
SEGMENT SIZE: 12 - Miles
INITIAL LISTING: 1996 **TMDL Schedule** 2001 - 2004
UPSTREAM LIMIT:

DESCRIPTION: Crab Creek headwaters.
RIVER MILE: 12.00
LATITUDE: 37.11750 **LONGTITUDE:** -80.37736

DOWNSTREAM LIMIT:

DESCRIPTION: Crab Creek mouth on the New R.
RIVER MILE: 0.00
LATITUDE: 37.15361 **LONGTITUDE:** -80.52891

The upstream limit is the Crab Creek headwaters on the Ironto Quad. The downstream limit is at the Crab Creek mouth on the New River about 1.5 mi upstream of the Rt. 114 Bridge and downstream of Radford, Virginia. The segment spans the Riner, Blacksburg and Radford North Quads.

Note: Change in segment mileage (1998 vs 2002) is the result of National Hydrograph Dataset (NHD) mileages and extension of the segment upstream to include the Crab Creek headwaters.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Swimmable Use - Not Supporting, Aquatic Life Use - Partially Supporting

IMPAIRMENT CAUSE: Fecal Coliform, General Standard (Benthic)

Swimming Use

Fecal coliform bacteria exceedances cause impairment of the swimming use. Waters in Crab Creek show continued impact as in 1998 by urban and agricultural nonpoint source pollution. The lower station, 9-CBC004.38 (at Rt. 660 Bridge below the Christiansburg STP) and an upstream station 9-CBC006.35 (at Rt. 661 above the Christiansburg STP) failed to support the swimming use. 9-CBC004.38 has 21 of 60 exceedances and 9-CBC006.35 exceeds in 21 of 59.

Aquatic Life Use

Benthic impairments cause failure to meet the aquatic life use. Biomonitoring at stations 9-CBC006.35, 9-CBC004.38 and 9-CBC001.00 show moderate impacts to the benthic community for the length of the segment.

This segment of Crab Creek is fully supporting, but threatened due to an abundance of total phosphorus exceedances. Station 9-CBC004.38 (at Rt. 660 Bridge below the former Christiansburg STP outfall) records 36 exceedances of the total phosphorus 0.20 mg/l threshold from 59 samples for the five year data window (1996 - 2000). Exceedances range from 0.30 to 2.60 mg/l. Upstream station 9-CBC006.35 (at Rt. 661 above

the Christiansburg STP) finds three exceedances from 60 samples. The Christiansburg STP outfall has been moved to the New River in December 1998. Total phosphorus values have reduced since 1998. The 1999 through 2000 range of values are from less than (<) 0.10 mg/l to a maximum of 0.30. 1999 through 2000 total phosphorus data record one exceedance from 23 samples. The fully supporting, but threatened segment extends 4.33 miles from the former Christiansburg outfall (37°09'23.73" / 80°28'13.41") downstream to the Crab Creek confluence with the New River.

IMPAIRMENT SOURCE NPS - Agriculture/Urban, NPS - Agriculture/Urban

Swimming Use

Fecal coliform sources of impairment are a mix of agricultural and urban nonpoint source runoff. Mainly urban in the upper reaches of the watershed and a mix of urban and agriculture in the lower reaches of the watershed.

Aquatic Life Use

General Standard Benthic sources of impairment are a mix of agricultural and urban nonpoint source runoff and stream bank erosion. Mainly urban in the upper reaches of the watershed and a mix of urban and agriculture in the lower reaches of the watershed.

Total phosphorus exceedances are primarily due to the Christiansburg STP former outfall on Crab Creek.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Floyd
STREAM NAME: Dodd Creek
HYDROLOGIC UNIT: 05050001
SEGMENT ID.: VAW-N20R_DDD03A00
SEGMENT SIZE: 15.41 - Miles
INITIAL LISTING: 1998 **TMDL Schedule** 2001 - 2004
UPSTREAM LIMIT:

DESCRIPTION: Junction of Routes 710 and 714.
RIVER MILE: 15.41
LATITUDE: 36.87139 **LONGTITUDE:** -80.29457

DOWNSTREAM LIMIT:

DESCRIPTION: Dodd Cr. mouth on West Fork Little R.
RIVER MILE: 0.00
LATITUDE: 36.93833 **LONGTITUDE:** -80.34064

The upper limit extends from the junction of Routes 710 and 714 downstream to the Dodd Creek mouth on the West Fork Little River. The segment spans the Woolwine and Floyd Quads.

Note: 1998 Impaired segment length is expanded to include the West Fork Dodd Creek and an unnamed tributary to the West Fork of Dodd Creek. The National Hydrography Dataset (NHD) was used to make mileage determinations.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Swimmable Use - Not Supporting

IMPAIRMENT CAUSE: Temperature - 1.18 miles, Fecal Coliform

Swimming Use

The anticipated Dodd Creek fecal coliform Total Maximum Daily Load (TMDL) Study and allocation scenario completion is 08/01/2002. Additional bacteria sampling above and below the 1998 303(d) Dodd Creek Impaired segment has increased the original segment size by 5.98 miles. 2002 tributary additions include the West Fork of Dodd Creek (6.47 miles) and an unnamed tributary to the West Fork (0.49 miles).

Fecal coliform bacteria exceedances of both the 1000 n/100 ml instantaneous and geometric mean 200 n/100 ml criteria cause the segment to not support the swimming goal. Listed below are the monitored sites showing instantaneous excursions / with total sample collections and geometric mean calculation exceedances / with total calculations. One ambient fixed site 9-DDD004.64 is included with the non-fixed sites below.

Dodd Creek

9-DDD000.04 Rt. 698 Bridge - 4/4 instant; 1/1 geomean.
9-DDD002.70 Rt. 696 Bridge - 4/4 instant; 1/1 geomean.
9-DDD004.64 Rt. 720 Bridge above Floyd STP - 2/19 instant.
9-DDD004.75 Rt. 720 Bridge - 4/4 instant; 1/1 geomean.

9-DDD006.27 Rt. 8 Bridge - 3/4 instant; 1/1 geomean.
9-DDD008.20 Rt. 710 Bridge - 1/3 instant; 1/1 geomean.

West Fork Dodd Creek

9-DDW000.02 Rt. 8 Bridge - 4/4 instant; 1/1 geomean.
9-DDW004.02 Rt. 714 Bridge - 4/4 instant; 1/1 geomean.
9-XDC000.48 Rt. 807 Bridge - 4/4 instant; 1/1 geomean.

The West Fork Dodd Creek impairment extends 6.47 miles from its headwaters (36°50'03.10" / 80°20'56.09") near the Blue Ridge Parkway downstream to the West Fork mouth on Dodd Creek (36°53'15.66" / 80°19'21.17"). The unnamed tributary portion extends 0.49 miles from just upstream of the Rt. 8 crossing (36°52'18" / 80°20'03") downstream to its confluence with the West Fork Dodd Creek (36°52'33" / 80°19'43") on the Floyd Quad.

The entirety of the study can be viewed at <http://www.deq.state.va.us> upon completion.

Aquatic Life Use

Station 9-DDW000.02 records two of two temperature exceedances causing the waters to not support the aquatic life use in these natural trout waters. The temperature criterion is 20°C. Exceedances occur in July 1999 (23.3°C) and June 2000 (20.1°C). The naturally impaired 1.18 mile segment extends from an unnamed tributary located at 36°52'33" / 80°19'43" downstream to the West Fork Dodd Creek confluence with Dodd Creek. The aquatic life use segment is a 2002 addition.

Note: Slight changes in segment mileage are due to use of the National Hydrography (NHD) dataset.

IMPAIRMENT SOURCE Natural, PS - Agriculture / Wildlife / Domestic septage

Swimming Use

The source of the impairment is believed to be a mix of agricultural, wildlife and domestic septage (straight pipes noted) nonpoint source runoff.

Aquatic Life Use

The water temperature exceedances are believed due to natural conditions. There are no known sources of heat to cause exceedance of the temperature criterion other than solar radiation.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Montgomery
STREAM NAME: Meadow Creek
HYDROLOGIC UNIT: 05050001
SEGMENT ID.: VAW-N21R_MDW01A00
SEGMENT SIZE: 4.48 - Miles
INITIAL LISTING: 2002 **TMDL Schedule** 2010 - 2014
UPSTREAM LIMIT:

DESCRIPTION: Confluence of Mill Cr. on Meadow Cr.
RIVER MILE: 4.48
LATITUDE: 37.07083 **LONGTITUDE:** -80.50862

DOWNSTREAM LIMIT:

DESCRIPTION: Meadow Cr. mouth on Little R.
RIVER MILE: 0.00
LATITUDE: 37.06028 **LONGTITUDE:** -80.54721

The Meadow Creek mainstem from the Mill Creek confluence downstream to the Meadow Creek mouth on Little River. The entire segment is on the Radford South Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Swimmable Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Three of four fecal coliform bacteria samples exceed the instantaneous criterion of 1000 n/100 ml at 9-MDW004.62 (Rt. 600 Bridge). The geometric mean of 200 n/100 ml exceeds in one of one calculations. The waters do not support the swimming use.

IMPAIRMENT SOURCE NPS - Agriculture/Wildlife/Domestic Septage

The source of the impairment is believed to be a mix of agricultural, wildlife and domestic septage nonpoint source runoff.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Montgomery
STREAM NAME: Mill Creek
HYDROLOGIC UNIT: 05050001
SEGMENT ID.: VAW-N21R_MLC02A00
SEGMENT SIZE: 15.27 - Miles
INITIAL LISTING: 1996 **TMDL Schedule** 2001 - 2002
UPSTREAM LIMIT:

DESCRIPTION: Mill Cr. headwaters.
RIVER MILE: 15.27
LATITUDE: 37.04361 **LONGTITUDE:** -80.41386

DOWNSTREAM LIMIT:

DESCRIPTION: Mill Cr. mouth on Meadow Cr.
RIVER MILE: 0.00
LATITUDE: 37.07083 **LONGTITUDE:** -80.50862

The segment begins at the headwaters of Mill Creek on the Riner Quad and extends downstream to the Mill Creek confluence with Meadow Creek at the Rt. 600 Bridge on the Radford South Quad (7.04 miles).

Note: The expanded 1998 Impaired segment includes Poplar Branch and two unnamed tributaries. The National Hydrography Dataset (NHD) was used to determine segment mileage.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Swimmable Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The anticipated Mill Creek fecal coliform Total Maximum Daily Load (TMDL) Study and allocation scenario completion is 05/01/2002. Additional bacteria sampling above and below the 1998 303(d) Impaired segment has increased the original segment size by 9.67 miles. The 2002 segment now extends to the headwaters of Mill Creek. Tributary additions include Poplar Branch and two unnamed tributaries.

Fecal coliform bacteria exceedances of both the 1000 n/100 ml instantaneous and geometric mean 200 n/100 ml criteria cause the segment to not meet the swimming goal. Listed below are the monitored sites showing instantaneous excursions / with total sample collections and geometric mean calculation exceedances / with total calculations. One ambient fixed site 9-MLC005.44 is included with the non-fixed sites below.

9-MLC000.17 Rt. 600 Bridge - 2/4 instant; 1/1 geomean.
9-MLC001.31 Rt. 693 Bridge - 2/5 instant; 1/1 geomean.
9-MLC002.74 Rt. 669 Bridge - 4/5 instant; 1/1 geomean.
9-MLC005.44 Rt. 8 Bridge - above Riner STP - 6/20 instant.
9-MLC006.00 Private road off Rt. 616 - 2/5 instant; 0/1 geomean.
9-PPL001.27 Rt. 616 Bridge - 2/2 instant.
9-XDE000.95 Rt. 678 Bridge - 4/5 instant; GM 1/1 geomean.

9-XDF000.11 Private road off Rt. 669 - 3/5 instant; GM 1/1 geomean.

IMPAIRMENT SOURCE NPS - Agriculture/Wildlife/Domestic Septage

The source is believed to be a mix of nonpoint source runoff from agricultural activity, wildlife and domestic septage.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Montgomery, Pulaski
STREAM NAME: Little River
HYDROLOGIC UNIT: 05050001
SEGMENT ID.: VAW-N21R_LRV04A00
SEGMENT SIZE: 1.29 - Miles
INITIAL LISTING: 2002 **TMDL Schedule** 2010 - 2014
UPSTREAM LIMIT:

DESCRIPTION: Meadow Creek mouth on Little R.
RIVER MILE: 3.51
LATITUDE: 37.06028 **LONGTITUDE:** -80.54721

DOWNSTREAM LIMIT:

DESCRIPTION: Backwaters of Little River Reservoir.
RIVER MILE: 2.22
LATITUDE: 37.07417 **LONGTITUDE:** -80.55881

This segment begins at the mouth of Meadow Creek and extends downstream to the backwaters of Little River Reservoir. The entire segment is on the Radford South Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Swimmable Use - Partially Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Exceedances of the fecal coliform bacteria criterion are found at the United States Geological Survey (USGS) station 03170000. Two of 14 samples exceed the instantaneous criterion of 1000 n/100 ml. The swimming use is only partially supporting as a result.

IMPAIRMENT SOURCE NPS - Agriculture/Wildlife

The believed source is a mixture of nonpoint source runoff from agricultural activity and wildlife.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Pulaski
STREAM NAME: Back Creek
HYDROLOGIC UNIT: 05050001
SEGMENT ID.: VAW-N22R_BCK01A00
SEGMENT SIZE: 16.37 - Miles
INITIAL LISTING: 1996 **TMDL Schedule** 2001 - 2004
UPSTREAM LIMIT:

DESCRIPTION: 0.70 miles below Rt. 636 crossing
RIVER MILE: 16.37
LATITUDE: 37.12583 **LONGTITUDE:** -80.77582

DOWNSTREAM LIMIT:

DESCRIPTION: Back Cr. mouth on the New R.
RIVER MILE: 0.00
LATITUDE: 37.20139 **LONGTITUDE:** -80.60289

The upstream limit is on the south edge of the White Gate Quad about 0.70 miles below the Rt. 636 crossing. The downstream end is the mouth of Back Creek on the New River just east of Parrott, Virginia. The segment spans the White Gate, Staffordsville and Radford North Quads.

Note: Adjustments to the 1998 segment mileage are due to the use of the National Hydrography Dataset (NHD).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Swimmable Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Fecal Coliform

Swimming Use

Fecal coliform bacteria cause the segment to fail to meet the swimming goal. The segment brackets station 9-BCK009.47 (Rt. 100 Bridge) on the Staffordsville Quad. 9-BCK009.47 records 17 of 23 samples exceeding the fecal coliform bacteria instantaneous criterion of 1000 n/100 ml.

Aquatic Life Use

Rapid Biological Protocol II survey finds the biota severely impaired at 9-BCK009.47. The waters do not support the aquatic life use as a result. The 2002 General Standard (benthic) impairment is new to the segment.

The segment is fully supporting, but threatened due to two total phosphorus threshold (0.20 mg/l) exceedances from 17 samples. The maximum exceedance is 0.40 mg/l, March of 1998. The segment brackets station 9-BCK009.47 (Rt. 100 Bridge) on the Staffordsville Quad.

Note: Slight adjustments in segment mileage are due to the use of the National Hydrography Dataset (NHD).

IMPAIRMENT SOURCE NPS - Agriculture/Urban, NPS - Agriculture/Urban

Swimming Use

The source is believed to be a mix of agricultural and urban nonpoint source pollution.

Aquatic Life Use

The source of the General Standard (Benthic) impairment and total phosphorus exceedances are believed to be a mix of agricultural and urban nonpoint source pollution.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Pulaski, Montgomery, Giles
STREAM NAME: New River
HYDROLOGIC UNIT: 05050001
SEGMENT ID.: VAW-N35R_NEW05A00
SEGMENT SIZE: 52.08 - Miles
INITIAL LISTING: 2002 **TMDL Schedule** 2010 - 2014
UPSTREAM LIMIT:

DESCRIPTION: Rt. 114 Bridge downstream of Crab Cr. mouth on the New R.

RIVER MILE: 75.67

LATITUDE: 37.16139 **LONGTITUDE:** -80.55244

DOWNSTREAM LIMIT:

DESCRIPTION: VA / WVA State Line.

RIVER MILE: 23.59

LATITUDE: 37.42861 **LONGTITUDE:** -80.85901

The segment begins at the Rt. 114 Bridge just downstream of the Crab Creek mouth (Watershed Boundary) on the New River and extends downstream to the VA / WVA State Line. The segment spans the Radford North, Eggleston, Pearisburg, Narrows and Peterstown, WVA Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Partially Supporting

IMPAIRMENT CAUSE: Fish Tissue - PCBs

Fish Consumption Use

The Virginia Department of Health (VDH) has issued a fish consumption advisory (August 6, 2001) for polychlorinated biphenyls (PCBs) for this portion of the New River based on fish tissue collections from Carp. The VDH advisory recommends no consumption of carp in this segment. The VDH level of concern is 600 parts per billion (ppb) in fish tissue. Please visit <http://www.deq.state.va.us> for more information regarding fish tissue collections and data.

Routine 2000 fish collections in watershed VAW-N22R at 9-NEW066.90 (New River at Whitethorne) reveal PCBs in excess of the human health-risk carcinogenic screening value (SV) of 54 ppb in tissue from Carp at 686 ppb. Other species at this site record the following values: Rock Bass 14.9; Northern Hogsucker 6.56; Smallmouth Bass 7.8 ppb. Sediment collections at this site found no exceedances of the effect-range median (ER-M) sediment screening value of 180 ppb.

Routine 2000 fish tissue collections in watershed VAW-N29R at 9-NEW030.15 (Route 460 Bridge at Glen Lyn) reveal PCBs in excess of the SV of 54 ppb in tissue from Carp at 3259 ppb. Other species at this site record the following values: Rock Bass 11.7; Smallmouth Bass 7.8; Northern Hog sucker 8.45 ppb. Sediment collections at this site found no exceedances of the PCB SV.

One station 9-NEW056.22 did record PCBs in excess of the sediment SV as described below.

Aquatic Life Use

The following stations found exceedances of the effect range- median (ER-M) for metals in parts per million (ppm) and one station PCBs in parts per billion (ppb) forming two fully supporting, but threatened sediment segments.

9-NEW077.36 Downstream of Crab Cr. mouth

9-NEW075.53 Rt. 114 Bridge

9-NEW057.83 Downstream of Goodwins Ferry at the foot of Buckeye Mtn.

9-NEW056.22 Route 730 Bridge at Eggleston Gage

9-NEW033.36 Upstream of Rich Creek

The first 'Threatened' segment extends 24.35 miles from the Rt. 114 Bridge downstream to the mouth of Little Stony Creek (37°18'54.33" / 80°38'39.07"). Exceedances of the 1995 NOAA effect range- median (ER-M) sediment metal screening values (SV) are found for cadmium (Cd, SV= 9.6 ppm, 1 of 1 sample 10 max.), lead (Pb, SV= 218 ppm, 1 of 1 sample 525 max.) and zinc (Zn, SV= 410 ppm 1 of 1 sample 2410) at station 9-NEW077.36. Station 9-NEW075.53 finds a sediment exceedance for zinc (Zn, SV= 410 ppm, 1 of 1 sample 594 max.). Station 9-NEW057.83 reports a zinc sediment exceedance (Zn, SV= 410 ppm, 1 of 1 sample 466 max.). Station 9-NEW056.22 reports exceedances for zinc (Zn, SV= 410 ppm, 1 of 4 samples 480 max.) and PCBs (SV= 180 ppb, 1 of 4 samples 950 max.).

The second 'Threatened' segment extends 3.53 miles from the mouth of Wolf Creek (37°20'04.27" / 80°48'35.42") downstream to the mouth of Rich Creek (37°22'53.61" / 80°49'39.38"). Station 9-NEW033.36 finds zinc (Zn, SV= 410 ppm, 1 of 1 sample 590 max.).

IMPAIRMENT SOURCE VDH Fish Consumption Advisory / Unknown

Fish Consumption Use

The exact source(s) of the PCB contamination is unknown.

The Virginia Department of Health (VDH) PCB level of concern is 600 ppb in fish tissue. PCBs are a group of man-made industrial chemicals that exist as a mixture and may contain up to 209 individual compounds. Since 1977, PCBs have not been produced in the U.S., but are still found in the environment. PCBs were once widely used as coolants and lubricants in transformers, capacitors and other electrical equipment. Other information on VDH fish consumption advisories, prohibitions or bans can be viewed at <http://www.vdh.state.va.us>

Aquatic Life Use

The exact source(s) of the sediment metals and PCB contamination is unknown.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Montgomery
STREAM NAME: Stroubles Creek
HYDROLOGIC UNIT: 05050001
SEGMENT ID.: VAW-N22R_STE03A00
SEGMENT SIZE: 7.08 - Miles
INITIAL LISTING: 1996 **TMDL Schedule** 2004 - 2004
UPSTREAM LIMIT:

DESCRIPTION: Duck Pond dam on the VPI & SU Campus

RIVER MILE: 9.59

LATITUDE: 37.22444 **LONGTITUDE:** -80.42995

DOWNSTREAM LIMIT:

DESCRIPTION: Slate Branch mouth on Stroubles Cr.

RIVER MILE: 2.51

LATITUDE: 37.18028 **LONGTITUDE:** -80.50450

The upstream end is at the Duck Pond dam on the southwest end of the VPI&SU campus on the Blacksburg Quad. The downstream end is at the Slate Branch mouth on Stroubles Creek.

Note: Adjustments from the 1998 General Standard (Benthic) Listing are due to the use of the National Hydrography Dataset (NHD) and the extension of the benthic segment to the mouth of Walls Branch.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Swimmable Use - Partially Supporting, Aquatic Life Use - Partially Supporting

IMPAIRMENT CAUSE: Fecal Coliform, General Standard (Benthic) - 4.98 miles

Swimming Use

Fecal coliform bacteria exceedances of the 1000 n/100 ml criterion cause partial support of the swimming use. Station 9-STE002.41 records three exceedances from 23 samples. The 7.08 mile 2002 fecal coliform impairment is new to the segment (2002).

Aquatic Life Use

The original 1998 Listed segment for contravention of the General Standard (Benthic) impairment continues. Citizen stations 9STE-3-SOS (Just before intersection of Plantation and Smithfield and 9STE-4-SOS (Downstream of 9-STE-3-SOS) both find a moderate probability of impairment at these sites. Citizen station 9-STE-5-SOS (AFS Restoration area) reports a low probability of adverse conditions. 9-STE006.69 located downstream of the aforementioned citizen stations reports moderate impairment from a total of 10 Rapid Biological Protocol II (RBP II) surveys. Citizen stations 9STE-6-SOS (Off Coal Hollow Rd) and 9STE-7-SOS (Off Stroubles Creek Rd) note a low probability for adverse conditions. However, the waters only partially support the aquatic life use. The General Standard (Benthic) impairment extends from the Duck pond outlet downstream to the mouth of Walls Branch (37°11'45.12" / 80°28'59.64") a total of 4.98 miles. The benthic Total Maximum Daily Load Study is tentatively scheduled for development in 2004.

Note: Adjustments from the 1998 General Standard (Benthic) Listing are due to the use of the National Hydrography Dataset (NHD) and the extension of the benthic segment to the mouth of Walls Branch.

IMPAIRMENT SOURCE NPS - Agriculture/Urban, NPS - Agriculture/Urban

Swimming Use

The believed source is nonpoint source pollution from agricultural activity and increased urbanization of the upper portion of the watershed.

Aquatic Life Use

The General Standard (Benthic) impairment source is believed to be a mixture of agricultural and urban nonpoint source runoff.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Giles
STREAM NAME: Little Stony Creek
HYDROLOGIC UNIT: 05050002
SEGMENT ID.: VAW-N24R_LRY01A00
SEGMENT SIZE: 2.06 - Miles
INITIAL LISTING: 2002 **TMDL Schedule** 2010 - 2014
UPSTREAM LIMIT:

DESCRIPTION: First upstream unnamed tributary to Little Stony Cr.

RIVER MILE: 2.06

LATITUDE: 37.33833 **LONGTITUDE:** -80.62913

DOWNSTREAM LIMIT:

DESCRIPTION: Little Stony Cr. mouth on the New River

RIVER MILE: 0.00

LATITUDE: 37.31500 **LONGTITUDE:** -80.64419

The segment begins at the first upstream unnamed tributary (at Pembroke) and extends to the Little Stony Creek mouth on the New River. The entire segment is on the Pearisburg Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Swimmable Use - Partially Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Fecal coliform bacteria cause the segment to partially support the swimming goal. The segment brackets station 9-LRY000.28 (Rt. T1404 Snidow St. in Pembroke). This station shows two of 17 samples exceeding the fecal coliform bacteria instantaneous criterion of 1000 n/100 ml.

IMPAIRMENT SOURCE NPS - Urban

The source is believed to be mainly from urban nonpoint source pollution.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Bland
STREAM NAME: Kimberling Creek
HYDROLOGIC UNIT: 05050002
SEGMENT ID.: VAS-N26R_KBL02A00
SEGMENT SIZE: 4.74 - Miles
INITIAL LISTING: 2002 **TMDL Schedule** 2010 - 2014
UPSTREAM LIMIT:

DESCRIPTION: Nobusiness Creek confluence
RIVER MILE: 9.18
LATITUDE: 37.17833 **LONGTITUDE:** -80.96111

DOWNSTREAM LIMIT:

DESCRIPTION: Dismal Creek confluence
RIVER MILE: 4.44
LATITUDE: 37.17361 **LONGTITUDE:** -80.90917

This segment begins at the confluence of Nobusiness Creek and ends at confluence with Dismal Creek. These tributaries flow from Jefferson National Forest and the segment is north of Route 42, parallel to Routes 606 and 608 at the Giles County border.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Swimmable Use - Partially Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The ambient monitoring station, 9-KBL007.29, had 3 of 29 fecal coliform violations.

IMPAIRMENT SOURCE NPS - Agriculture

The landuse along the stream is predominately agricultural.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Bland
STREAM NAME: Wolf Creek
HYDROLOGIC UNIT: 05050002
SEGMENT ID.: VAS-N30R_WFC01A00
SEGMENT SIZE: 8.97 - Miles
INITIAL LISTING: 2002 **TMDL Schedule** 2010 - 2014
UPSTREAM LIMIT:

DESCRIPTION: Unnamed Tributary downstream of Carter Branch confluence

RIVER MILE: 40.06

LATITUDE: 37.14833 **LONGTITUDE:** -81.24833

DOWNSTREAM LIMIT:

DESCRIPTION: Hunting Camp Creek confluence

RIVER MILE: 31.09

LATITUDE: 37.17028 **LONGTITUDE:** -81.14139

This segment begins at the confluence with an unnamed tributary downstream of Carter Branch and flows along Route 614 through Grapefield to Bastian where it ends at the confluence with Hunting Camp Creek.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Swimmable Use - Partially Supporting

IMPAIRMENT CAUSE: Fecal Coliform

The ambient monitoring station, 9-WFC032.47, had 2 of 10 fecal coliform violations.

IMPAIRMENT SOURCE NPS - Agriculture

The landuse along the stream is predominately agricultural.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Bland
STREAM NAME: Hunting Camp Creek
HYDROLOGIC UNIT: 05050002
SEGMENT ID.: VAS-N31R_HCC01A00
SEGMENT SIZE: 8.45 - Miles
INITIAL LISTING: 1998 **TMDL Schedule** 2002 - 2004
UPSTREAM LIMIT:

DESCRIPTION: Hunting Camp Creek impoundment
RIVER MILE: 8.45
LATITUDE: 37.10306 **LONGTITUDE:** -81.23417

DOWNSTREAM LIMIT:

DESCRIPTION: Wolf Creek confluence
RIVER MILE: 0.00
LATITUDE: 37.17028 **LONGTITUDE:** -81.14167

This segment begins at the impoundment on Hunting Camp Creek above the community of Suiter, and continues to its mouth at Wolf Creek. It flows through the community of Bastian. This segment has been extended an additional 1.21 miles on the basis of a landuse survey.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Partially Supporting, Swimmable Use - Not Supporting

IMPAIRMENT CAUSE: General Standard (Benthic), Fecal Coliform

The biological monitoring station, 9-HCC001.40, was sampled twice and found moderately impaired. A second station, 9-HCC000.16, was sampled once and also assessed as moderately impaired. This segment has been extended an additional 1.21 miles on the basis of a landuse survey. Ambient samples, 9-HCC001.40 have violations in 4 of 10 samples for fecal coliform for the 2002 assessment.

IMPAIRMENT SOURCE NPS - Agriculture, NPS - Urban

The landuse along the stream is predominately pasture with erosion and sedimentation occurrences. There are also urban influences as it flows through Bastian that contribute to the impairment. A new sewerage treatment plant is planned for Bastian that may alleviate some of the degradation.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Bland
STREAM NAME: Laurel Creek
HYDROLOGIC UNIT: 05050002
SEGMENT ID.: VAS-N33R_LAC01A00
SEGMENT SIZE: 1.61 - Miles
INITIAL LISTING: 2002 **TMDL Schedule** 2010 - 2014
UPSTREAM LIMIT:

DESCRIPTION: Dry Fork
RIVER MILE: 1.61
LATITUDE: 37.25472 **LONGTITUDE:** -81.11583

DOWNSTREAM LIMIT:

DESCRIPTION: Wolf Creek confluence
RIVER MILE: 0.00
LATITUDE: 37.24250 **LONGTITUDE:** -81.10167

This segment begins at the confluence of Dry Fork at North Gap along Route 52. The segment ends at Rocky Gap at Interstate 77 at the Wolf Creek confluence.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Swimmable Use - Partially Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Ambient samples, 9-LAC00.56 have violations in 2 of 10 samples for fecal coliform for the 2002 assessment.

IMPAIRMENT SOURCE Unknown

Source of the fecal violations is unknown.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Giles
STREAM NAME: Rich Creek
HYDROLOGIC UNIT: 05050002
SEGMENT ID.: VAW-N34R_RHC01A00
SEGMENT SIZE: 2.77 - Miles
INITIAL LISTING: 2002 **TMDL Schedule** 2010 - 2014
UPSTREAM LIMIT:

DESCRIPTION: Brush Cr. mouth on Rich Cr.
RIVER MILE: 2.77
LATITUDE: 37.39889 **LONGTITUDE:** -80.80642

DOWNSTREAM LIMIT:

DESCRIPTION: Rich Cr. mouth on the New R.
RIVER MILE: 0.00
LATITUDE: 37.38139 **LONGTITUDE:** -80.82761

The segment begins just downstream of Peterstown, West Virginia at the mouth of Brush Creek on Rich Creek and extends to Rich Creek's confluence with the New River. The entire segment is on the Peterstown, WVA Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Swimmable Use - Not Supporting

IMPAIRMENT CAUSE: Fecal Coliform

Fecal coliform bacteria cause the segment to not support the swimming use. The segment brackets station 9-RHC000.08 (Rt. 806 Bridge). This station finds seven of 21 samples exceeding the fecal coliform bacteria instantaneous criterion of 1000 n/100 ml.

IMPAIRMENT SOURCE NPS - Urban

The believed source is urban nonpoint source pollution.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Tazewell
STREAM NAME: Bluestone River
HYDROLOGIC UNIT: 05050002
SEGMENT ID.: VAS-N36R_BST04A02
SEGMENT SIZE: 6.05 - Miles
INITIAL LISTING: 1996 **TMDL Schedule** 2006 - 2004
UPSTREAM LIMIT:

DESCRIPTION: Wrights Valley Creek confluence
RIVER MILE: 27.76
LATITUDE: 37.24944 **LONGTITUDE:** -81.28750

DOWNSTREAM LIMIT:

DESCRIPTION: Watershed N37R boundary
RIVER MILE: 21.71
LATITUDE: 37.28583 **LONGTITUDE:** -81.31333

This is a portion of an 6.65 mile segment which extends from Wrights Valley Creek confluence, near the western Bluefield city limit, to the N37 watershed limit at Big Creek. Only 6.05 miles are in N36 the remainder are in N37.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Swimmable Use - Partially Supporting, Aquatic Life Use - Partially Supporting, Fish Consumption Use - Partially Supporting

IMPAIRMENT CAUSE: Fecal Coliform, General Standard (Benthic), Fish Tissue - PCBs

An ambient water quality monitoring station, 9-BST023.05, has fecal coliform violations (9 of 51). Additionally, there is a biological monitoring station, 9-BST022.27, which is assessed as moderately impaired. Fish Tissue at 9-BST021.26 was found to have PCBs.

IMPAIRMENT SOURCE NPS - Urban

Urban nonpoint sources, raw sewage discharges from both Bluefield STP pump station overflows and West Virginia communities are the sources of fecal coliform violations.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Tazewell
STREAM NAME: Bluestone River
HYDROLOGIC UNIT: 05050002
SEGMENT ID.: VAS-N36R_BST04B02
SEGMENT SIZE: 1.63 - Miles
INITIAL LISTING: 2002 **TMDL Schedule** 2010 - 2014
UPSTREAM LIMIT:

DESCRIPTION: Bluefield Intake
RIVER MILE: 29.39
LATITUDE: 37.23694 **LONGTITUDE:** -81.28500

DOWNSTREAM LIMIT:

DESCRIPTION: Wrights Valley Creek confluence
RIVER MILE: 27.76
LATITUDE: 37.24944 **LONGTITUDE:** -81.28750

This segment extends from the confluence with Dill Springs Run, just above the water intake, to the confluence with Wrights Valley Creek in Bluefield.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Swimmable Use - Partially Supporting, Fish Consumption Use - Partially Supporting

IMPAIRMENT CAUSE: Fecal Coliform, General Standard (Fish Tissue)

An ambient water quality monitoring station, 9-BST029.57, has fecal coliform violations of the water quality standards. A fish tissue station at 9-BST029.71 is also in this segment. However, a fish consumption advisory from the Health Dept. includes this segment in a PCB fish advisory.

IMPAIRMENT SOURCE NPS - Urban, Unknown

There is housing all along the riverbank, thus urban nonpoint impacts are suspected as the source. Another possible source of fecal coliform violations is the golf course waterfowl population that is adjacent to the monitoring station.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Tazewell
STREAM NAME: Bluestone River
HYDROLOGIC UNIT: 05050002
SEGMENT ID.: VAS-N36R_BST05A02
SEGMENT SIZE: 4.93 - Miles
INITIAL LISTING: 2002 **TMDL Schedule** 2010 - 2014
UPSTREAM LIMIT:

DESCRIPTION: Route 460 Bridge
RIVER MILE: 34.32
LATITUDE: 37.21750 **LONGTITUDE:** -81.34750

DOWNSTREAM LIMIT:

DESCRIPTION: Public Water Intake
RIVER MILE: 29.39
LATITUDE: 37.23694 **LONGTITUDE:** -81.28500

The segment begins at the Route 460 bridge just above Route 744 and extends downstream to just above the public water intake in Bluefield.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Partially Supporting

IMPAIRMENT CAUSE:

 Fish Tissue

A fish tissue station at 9-BST029.71, has fish tissue values above the threshold.

IMPAIRMENT SOURCE

 Unknown

Urban nonpoint impacts are suspected as the source.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Tazewell
STREAM NAME: Laurel Fork
HYDROLOGIC UNIT: 05050002
SEGMENT ID.: VAS-N37R_LRR01A94
SEGMENT SIZE: 2.84 - Miles
INITIAL LISTING: 1994 **TMDL Schedule** 2006 - 2008
UPSTREAM LIMIT:

DESCRIPTION: Route 644
RIVER MILE: 2.84
LATITUDE: 37.29972 **LONGTITUDE:** -81.35361

DOWNSTREAM LIMIT:

DESCRIPTION: Bluestone River confluence
RIVER MILE: 0.00
LATITUDE: 37.31222 **LONGTITUDE:** -81.33444

This segment extends from Pocahontas High School, on Route 644, through Pocahontas to the confluence with Bluestone River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Swimmable Use - Partially Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, General Standard (Benthic), Fecal Coliform

The ambient water quality monitoring station, 9-LRR002.19, has dissolved oxygen violations and fecal coliform violations at this station as well as has sediment effect range-median (ER-M) value exceedences for lead, zinc, beryllium, cadmium, chromium, copper, nickel, and thallium. . A biological monitoring station, 9-LRR001.39, indicates the segment is severely impaired.

IMPAIRMENT SOURCE NPS - Urban, NPS - Urban

The source for the fecal coliform violations in this segment are urban nonpoint and overflows from the municipal collection system. Pocahontas STP has a history of operational problems and violations of their discharge limits. Resource extraction has been a major land use in the watershed for nearly a century. The biological habitat within this section is severely stressed due to both urban land uses and probably resource extraction. Channel modifications and lack of riparian zone buffers are some of the results of urban encroachment.

2002 PART 1A IMPAIRED WATERS FACT SHEET

RIVER BASIN: NEW RIVER BASIN
CITY/COUNTY: Tazewell
STREAM NAME: Bluestone River
HYDROLOGIC UNIT: 05050002
SEGMENT ID.: VAS-N37R_BST01A96
SEGMENT SIZE: 0.6 - Miles
INITIAL LISTING: 1996 **TMDL Schedule** 2006 - 2008
UPSTREAM LIMIT:

DESCRIPTION: VAS-N37R boundary
RIVER MILE: 21.71
LATITUDE: 37.28583 **LONGTITUDE:** -81.31333

DOWNSTREAM LIMIT:

DESCRIPTION: West Virginia state line
RIVER MILE: 21.11
LATITUDE: 37.29056 **LONGTITUDE:** -81.30722

The segment falls in two watersheds and begins at the confluence with Wrights Valley Creek then extends to the state line across the watershed boundary of VAS-N36R and VAS-N37R.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Swimmable Use - Partially Supporting, Fish Consumption Use - Partially Supporting, Aquatic Life Use - Partially Supporting

IMPAIRMENT CAUSE: Fecal Coliform, Fish Tissue - PCBs, General Standard (Benthic)

An ambient water quality monitoring station, 9-BST023.05, has fecal coliform violations. Additionally, there is a biological monitoring station, 9-BST022.27, which is assessed as moderately impaired. Also the fish consumption advisory from VDH extends to the state line from N36R at the Route 460 bridge.

IMPAIRMENT SOURCE NPS - Urban, Unknown, NPS - Urban

Urban nonpoint sources and raw sewage discharges from both Bluefield STP pump station overflows and West Virginia communities are the sources of fecal coliform violations. Sources for Benthic impacts are also probably urban nonpoint. The source of PCBs in the fish tissue are unknown.